

and would be outweighed by public interest benefits.⁸⁴ However, it cautioned that it would continue to monitor the market to ensure that independent wireless competitors and intermodal competition would not be impeded.⁸⁵ In this regard, the merger of Sprint and Nextel should facilitate, rather than diminish, intermodal competition by increasing the ability of these independent wireless competitors to reduce their costs, improve their product offerings, and compete more effectively.

VII. Conclusions

154. The merger of Sprint and Nextel is unlikely to raise significant competitive concerns. The merger will produce a number of efficiencies that will reduce the cost of serving additional subscribers or producing extra minutes of service, and improve the quality of the service that is offered by Sprint Nextel. Thus, these efficiencies will directly benefit wireless subscribers and increase wireless competition. Many of these efficiencies likely would not have occurred absent the merger or would not have occurred as quickly. Therefore, they are merger-specific.

155. The initial structural screens used by the Commission for identifying markets for further analysis in the Cingular-AT&T Wireless transaction would not identify most of the local geographic markets that appear in the Telephia data that we have analyzed. Even fewer Telephia markets would be identified if the structural screens were adjusted to reflect significant differences between the two transactions, especially the fact that Sprint Nextel will not be affiliated with one of the leading local exchange carriers.

156. In the local markets where more detailed competitive analysis would be required by the structural screens, there seems little likelihood that the merger will give Sprint Nextel an incentive to raise prices unilaterally. Sprint and Nextel do not appear to be especially close substitutes, nor would

⁸⁴ *Id.* ¶¶ 247-249.

⁸⁵ *Id.* ¶ 250.

Sprint Nextel be the leading firm in most markets. Rival carriers also appear to have sufficient capacity to absorb a significant number of additional subscribers in the event of an attempted unilateral price increase by Sprint Nextel, even in screen-identified markets in which the Sprint Nextel share is large. The potential for output expansion by rivals will, therefore, deter the merged firm from raising prices. Taken together with the efficiencies that the merger is expected to produce, these factors make unilateral price increases unlikely.

157. Similarly, based on our analysis to date, we conclude that there is little concern that the merger could increase the likelihood of coordination among the leading firms. Pricing to enterprise customers does not appear to be transparent. There are now, and will remain, substantial asymmetries among wireless carriers, including the fact that only some carriers are affiliated with ILECs and the fact that the carriers are situated differently on their technology paths. Moreover, there appears to be sufficient capacity to discipline attempts to coordinate price increases by the two leading firms in a market. Given these factors and the expected efficiencies, coordinated price increases also seem unlikely. Closer examination of those few markets where the SAC is inadequate suggests that even in these markets, the merger is not likely to lead to pricing coordination. Moreover, the merger will not decrease intermodal competition and more likely will increase it by permitting Sprint Nextel to become more efficient.

APPENDIX 1

STANLEY M. BESEN—Vice President

Ph.D. Economics, Yale University
M.A. Economics, Yale University
B.B.A. Economics, City College of New York

Dr. Besen is a Vice President in CRA's Economic Litigation Program.

PROFESSIONAL EXPERIENCE

1992–present *Vice President, Charles River Associates, Washington, DC.*
1980–1992 *Senior Economist, The RAND Corporation, Washington, DC.*
1990–1991 *Visiting Professor of Law and Economics, Georgetown University Law Center.*
1988–1989 *Visiting Henley Professor of Law and Business, Columbia University.*
1985–1988 *Co-editor, RAND Journal of Economics.*
1978–1980 *Co-director, Network Inquiry Special Staff, Federal Communications Commission.*
1971–1972 *Brookings Economic Policy Fellow, Office of Telecommunications Policy, Executive Office of the President.*
1965–1980 *Assistant Professor, Associate Professor, Professor of Economics, Allyn R. and Gladys M. Cline Professor of Economics and Finance, Rice University.*
1963–1965 *Economist, Institute for Defense Analyses.*
1962–1963 *Acting Assistant Professor of Economics, University of California, Santa Barbara.*

CONSULTANCIES

1972–1978 The RAND Corporation
1972–1977 Office of Telecommunications Policy, Executive Office of the President
1975 Texoma Regional Planning Commission
1967 Department of Defense

PROFESSIONAL ACTIVITIES/HONORS

Member, National Research Council Board on Earth Sciences and Resources, Division on Earth and Life Studies, Committee on Licensing Geographic Data and Services, 2002–2004

Member, The National Academies Computer Science and Telecommunications Board Committee on Internet Searching and the Domain Name System, 2001–2004

Member, Editorial Board, *Information Economics and Policy*, 1992–2004

Member, Editorial Board, *Economics of Innovation and New Technology*, 1989–present

Member, U.S. National Committee on Data for Science and Technology (CODATA), National Academy of Sciences/National Research Council, 1993–1996

Member, Office of Technology Assessment Advisory Panel on Communications Systems for an Information Age, 1986-1988

Member, Regional Telecommunications Planning Advisory Committee, City of Cincinnati, 1985

Member, Office of Technology Assessment Advisory Panel on Intellectual Property Rights in an Age of Electronics and Information, 1984-1985

Expert, World Intellectual Property Organization/UNESCO Meeting on Unauthorized Private Copying of Recordings, Broadcasts and Printed Matter, 1984

Listed in *Who's Who in America*, 1982-1983, 1984-1985, 1986-1987, 1988-1989, 1990-1991, 1992-1993, 1994, 1995, 1996, 1997, 1998, 1999, 2000, 2001, 2002, 2003, 2004, 2005

Member, Editorial Board, *Southern Economic Journal*, 1979-1981

Member, Task Force on National Telecommunications Policy Making, Aspen Institute Program on Communications and Society, 1977

Brookings Economic Policy Fellow, 1971-1972

Member, Technical Advisory Committee on Business Development, Model City Program, City of Houston, 1969-1971

Wilson University Fellow, 1959-1961

Overbrook Fellow, 1958-1959

Beta Gamma Sigma, 1958

PUBLICATIONS

Books and Reports

Telecommunications and Information Technology Standardization in Japan: A Preliminary Survey. The RAND Corporation, N-3204-CUSJR, 1991.

Compensating Creators of Intellectual Property: Collectives that Collect. With S. Kirby. The RAND Corporation, R-3751-MF, 1989.

New Technologies and Intellectual Property: An Economic Analysis. The RAND Corporation, N-2601-NSF, 1987.

Compatibility Standards, Competition, and Innovation in the Broadcasting Industry. With L. Johnson. The RAND Corporation, R-3453-NSF, 1986.

The Economics of Bulk Power Exchanges. With J. Acton. The RAND Corporation, N-2277-DOE, 1985.

Misregulating Television: Network Dominance and the FCC. With T. Krattenmaker, A. Metzger, and J. Woodbury. Chicago: University of Chicago Press, 1984.

An Analysis of the Federal Communication Commission's Group Ownership Rules. With L. Johnson. The RAND Corporation, N-2097-MF, 1984.

Regulation of Media Ownership by the Federal Communications Commission: An Assessment. With L. Johnson. The RAND Corporation, R-3206-MF, 1984.

Issues in the Design of a Market Experiment for Bulk Electrical Power. With J. Acton. The RAND Corporation, N-2029-DOE, 1983.

An Economic Analysis of Mandatory Leased Channel Access for Cable Television. With L. Johnson. The RAND Corporation, R-2989-MF, 1982.

After Energy Price Decontrol: The Role of Government Conservation Programs. With L. Johnson. The RAND Corporation, N-1903-DOE, 1982.

Cable Copyright and Consumer Welfare: The Hidden Cost of the Compulsory License. With H. Shooshan, C. Jackson, and J. Wilson. Shooshan and Jackson, 1981.

New Television Networks: Entry, Jurisdiction, Ownership, and Regulation. With T. Krattenmaker et al. Final Report, Network Inquiry Special Staff, Federal Communications Commission, 1980.

Economic Policy Research on Cable Television: Assessing the Costs and Benefits of Cable Deregulation. With B.M. Mitchell, R.G. Noll, B.M. Owen, R.E. Park, and J.N. Rosse. Prepared for the Office of Telecommunications Policy, Executive Office of the President, December 1976. Reprinted in P. MacAvoy (ed.), *Deregulation of Cable Television*, American Enterprise Institute, 1977.

On Measuring the Gain in Economic Welfare from Marginal Cost Pricing when a Related Market Is of Importance: The Case of Electricity and Natural Gas. With B. Mitchell. The RAND Corporation, P-5755, 1977.

"A Simultaneous Equations Model of Television Station Revenue and Expenditure." Appendix F to R. Park, L. Johnson, and B. Fishman, *Projecting the Growth of Television Broadcasting: Implications for Spectrum Use*. The RAND Corporation, R-1841-FCC, 1976.

Introduction to Monetary Economics. Harper and Row, 1975.

An Economic Evaluation of an Alternative Method of Funding Public Broadcasting. Broadcasting Institute of North America, 1973.

Evaluating the Returns to Regional Economic Development Programs. Institute for Defense Analyses, B-272, 1966.

Internal Prices as an Administrative Tool: An Application to the Military Air Transport Service. With M. Bailey, J. Cross, and W. Sewell. Institute for Defense Analyses, S-200, 1965.

Articles and Book Chapters

"Evaluating the Competitive Effects of Mergers of Internet Backbone Providers." *ACM Transactions on Internet Technology*, (with J.S. Spigel and P. Srinagesh), 2002.

"Advances in Routing Technologies and Internet Peering Agreements." *American Economic Association Papers and Proceedings*, (with P. Milgrom, B.M. Mitchell, and P. Srinagesh), 2001.

"Intellectual Property." In *The New Palgrave Dictionary of Economics and the Law*, The Macmillan Press, 1998. Reprinted in R. Towse and R.W. Holzhauser (eds.), *The Economics of Intellectual Property*, Edward Elgar, 2001.

"Analyzing Vertical and Horizontal Cross Ownership in Cable Television: the Time Warner-Turner Merger (1996)." In J.E. Kwoka and L.J. White, *The Antitrust Revolution: Economics, Competition, and Policy*, Third Edition, Scott, Foresman, (with E. Murdoch, D. O'Brien, S. Salop and J. Woodbury), 1998.

"Telecommunications in the U.S.A: Evolution to Pluralism." In B. Lange (ed.), *ISDN: An International Comparison of Trends in the USA, Japan, Singapore and Europe*, Final Report to the ISDN Commission of North Rhine-Westphalia, (with S.R. Brenner and J.R. Woodbury), 1996.

"The Standards Processes in Telecommunications and Information Technology." In R. Hawkins, R. Mansell and J. Skea (eds.), *Standards, Innovation, and Competitiveness: The Politics and Economics of Standards in Natural and Technical Environments*, Edward Elgar, 1995.

"Rate Regulation, Effective Competition, and the Cable Act of 1992." *Hastings Communications and Entertainment Law Journal*, (with J.R. Woodbury), 1994.

"Choosing How to Compete: Strategies and Tactics in Standardization." *Journal of Economic Perspectives*, (with J. Farrell), 1994.

"AM v. FM: The Battle of the Bands." *Industrial and Corporate Change*, 1992.

"An Economic Analysis of Copyright Collectives." *Virginia Law Review*, (with S. Kirby and S. Salop), 1992.

"The Role of the ITU in Telecommunications Standardization: Pre-Eminence, Impotence, or Rubber Stamp?" *Telecommunications Policy*, (with J. Farrell), 1991. Reprinted as The RAND Corporation, RP-100, 1992.

"An Introduction to the Law and Economics of Intellectual Property." *Journal of Economic Perspectives*, (with L. Raskind), 1991. Translated and reprinted as "Introduzione agli Aspetti Legislativi ed Economici della Proprieta Intellettuale," in G. Goisis (ed.), *Efficienza Produttiva: Alcuni Contributi Su Noti (E Meno Noti) Argomenti*, CEDAM, 1994; reprinted in K.E. Maskus (editor), *The WTO, Intellectual Property Rights and the Knowledge Economy*, Cheltenham, UK and Northampton, MA, USA: Edward Elgar Publishing, 2004.

"The European Telecommunications Standards Institute: A Preliminary Analysis." *Telecommunications Policy*, 1990. Reprinted as The RAND Corporation, N-3320-NSF, 1991.

"Separate Satellite Systems and INTELSAT: An American View." *Revue de Droit de l'Informatique et des Telecoms*, 1989.

"The Economics of Telecommunications Standards." In R. Crandall and K. Flamm (eds.), *Changing the Rules: Technological Change, International Competition, and Regulation in Communications*, Brookings Institution, (with G. Saloner), 1989. Reprinted as "Compatibility Standards and the Market for Telecommunications Services," in T.J. Allen and M.S. Scott Morton (eds.), *Information Technology and the Corporation of the 1990s*, Oxford University Press, 1994.

"Private Copying, Appropriability, and Optimal Copying Royalties." *Journal of Law and Economics*, (with S. Kirby), October 1989. An earlier version appeared as The RAND Corporation, R-3546-NSF, 1987.

"Assessing the Effects of Bulk Power Rate Regulation: Results from a Market Experiment." *Applied Economics* (with J. Acton), May 1987. Reprinted in J. Plummer and S. Troopman (eds.), *Competition in Electricity: New Markets and New Structures* (Public Utilities Reports and QED Research, 1990). An earlier and more extended version appeared as *Regulation, Efficiency, and Competition in the Exchange of Electricity: First-Year Results from the FERC Bulk Power Market Experiment* (The RAND Corporation, R-3301-DOE, 1985).

"Discussion of Michael A. Tyler, 'The Extent of Software Piracy.'" In F. Huband and R. Shelton (eds.), *Protection of Computer Systems and Software*. Clifton, NJ: Law & Business, Inc., 1986.

"Private Copying, Reproduction Costs, and the Supply of Intellectual Property." *Information Economics and Policy*, 1986. Reprinted in D. Lamberton (ed.), *The Economics of Communication and Information*, Edward Elgar, 1996. An earlier version appeared as The RAND Corporation, N-2207-NSF, 1984.

"Copying Costs and the Costs of Copying." In M. Greenberger (ed.), *Electronic Publishing Plus: Media for a Technological Future*. Knowledge Industries, 1985.

"Regulation of Broadcast Station Ownership: Evidence and Theory." in E. Noam (ed.), *Video Media Competition: Regulation, Economics, and Technology*, Columbia University Press, (with L. Johnson), 1985.

"The Regulation of Telecommunications Networks." *Information Society*, 1984.

"The Determinants of Network Television Program Prices: Implicit Contracts, Regulation, and Bargaining Power." *The Bell Journal of Economics*, (with J. Woodbury and G. Fournier), 1983.

"Regulation, Deregulation, and Antitrust in the Telecommunications Industry." *The Antitrust Bulletin*, (with J. Woodbury), 1983.

Summary Comments in E. Noam (ed.), *Telecommunications Regulation Today and Tomorrow*. Law & Business, Inc./Harcourt Brace Jovanovich, 1983.

"Economic Implications of Mandated Efficiency Standards for Household Appliances: Comment." *The Energy Journal*, (with L. Johnson), 1982.

"Regulating Network Television: Dubious Premises and Doubtful Solutions." *Regulation*, (with T. Krattenmaker), 1981.

"The Deregulation of Cable Television." *Law and Contemporary Problems*, (with R. Crandall), 1981.

"An Analysis of the Network-Affiliate Relationship in Television." Network Inquiry Special Staff, Federal Communications Commission, (with S. Preskill), 1980.

"The Value of Television Time: Some Problems and Attempted Solutions: Reply." *Southern Economic Journal*, 1978.

"Copyright Liability for Cable Television: Compulsory Licensing and the Coase Theorem." *Journal of Law and Economics*, (with W. Manning and B. Mitchell), April 1978. Reprinted in R. Towse and R.W. Holzhauser (eds.), *The Economics of Intellectual Property*, Edward Elgar, 2001. An earlier version appeared as "Copyright Liability for Cable Television: Is Compulsory Licensing the Solution?" The RAND Corporation, R-2023-MF, 1977.

"Deregulating Telecommunications — Sorting Out Mixed Signals." *Regulation*, 1978.

"The Value of Television Time." *Southern Economic Journal*, January 1976. An earlier version appeared as "The Value of Television Time and the Prospects for New Stations," The RAND Corporation, R-1328-MF, 1973.

"Watergate and Television: An Economic Analysis." *Communications Research*, July 1976. An earlier version appeared as The RAND Corporation, R-1712-MF, 1975.

"Market Size, VHF Allocations, and the Viability of Television Stations." *Journal of Industrial Economics*, (with P. Hanley), 1975.

"The Economics of the Network-Affiliate Relationship: Reply." *American Economic Review*, (with R. Soligo), 1975.

"The Economics of the Cable Television 'Consensus.'" *Journal of Law and Economics*, 1974.

"Education and Productivity in United States Manufacturing: Some Cross-Section Evidence." *Journal of Political Economy*, 1973.

"The Economics of the Network-Affiliate Relationship in the Television Broadcasting Industry." *American Economic Review*, (with R. Soligo), 1973.

"Elasticities of Substitution and Returns to Scale in United States Manufacturing: Some Additional Evidence." *Southern Economic Journal*, 1967.

"Cost Effectiveness Analysis for the 'War on Poverty.'" in T. Goldman (ed.), *Cost-Effectiveness Analysis: New Approaches in Decision-Making*. New York: Praeger, (with A. Fechter and A. Fisher), 1967.

"An Empirical Analysis of Commercial Bank Lending Behavior." *Yale Economic Essays*, 1965.

CONGRESSIONAL TESTIMONY

Witness, Subcommittee on Intellectual Property and Judicial Administration, Committee on the Judiciary, US House of Representatives, 1991. Prepared statement and testimony appear in *Intellectual Property and International Issues*, 102nd Congress, 1st Session.

Witness, Subcommittee on Telecommunications and Finance, Committee on Energy and Commerce, US House of Representatives, 1990. Prepared statement and testimony appear in *Cable Television Regulation (Part 2)*, 101st Congress, 2nd Session.

Witness, Subcommittee on Telecommunications, Consumer Protection, and Finance, Committee on Energy and Commerce, US House of Representatives, 1983. Prepared statement and testimony appear in *Options for Cable Legislation*, 98th Congress, 1st Session.

Witness, Subcommittee on Communications, Committee on Commerce, Science, and Transportation, US Senate, 1982. Prepared statement and testimony appear in *Cable Television Regulation*, 97th Congress, 2nd Session.

Witness, Subcommittee on Telecommunications, Consumer Protection, and Finance, Committee on Energy and Commerce, US House of Representatives, 1981. Prepared statement and testimony appear in *Status of Competition and Deregulation in the Telecommunications Industry*, 97th Congress, 1st Session.

Witness, Subcommittee on General Oversight and Minority Enterprise, Committee on Small Business, US House of Representatives, 1980. Prepared statement and testimony appear in *Media Concentration (Part 1)*, 96th Congress, 2nd Session.

Witness, Subcommittee on Communications, Committee on Commerce, Science, and Transportation, US Senate, 1977. Prepared statement and testimony appear in *Cable Television*, 95th Congress, 1st Session.

Witness, Subcommittee on Communications, Committee on Interstate and Foreign Commerce, US House of Representatives, 1976. Prepared statement and testimony appear in *Cable Television Regulation Oversight (Part 1)*, 94th Congress, 2nd Session.

STEVEN C. SALOP—Senior Consultant

Ph.D. Economics, Yale University
M.Phil. Economics, Yale University
B.A. Economics, University of Pennsylvania

FIELDS OF SPECIALIZATION

Industrial Organization
Competition and Antitrust Policy
Economics of Information
Law and Economics

EMPLOYMENT EXPERIENCE

Current Position: Professor of Economics and Law, Georgetown University Law Center (at GULC since August 1981).

Guest Scholar, Brookings Institution, 1990–1991.

Visiting Professor, Massachusetts Institute of Technology, Spring 1986.

Visiting Interdisciplinary Professor, Georgetown University Law Center, July 1981–June 1982.

Associate Director for Special Projects, Bureau of Economics, Federal Trade Commission, January 1980–June 1981.

Assistant Director for Industry Analysis, Bureau of Economics, Federal Trade Commission, September 1979–January 1980.

Deputy Assistant Director for Consumer Protection, Bureau of Economics, Federal Trade Commission, December 1978–September 1979.

Economist, Division of Consumer Protection, Bureau of Economics, Federal Trade Commission, July 1978–December 1978.

Economist, Office of Economic Analysis, Civil Aeronautics Board, September 1977–July 1978.

Economist, Federal Reserve Board, July 1972–September 1977.

Adjunct Professor, Department of Economics, University of Pennsylvania, September 1977– June 1978.

Adjunct Professor, Department of Economics, George Washington University, September 1975–January 1978.

SELECTED PROFESSIONAL ACTIVITIES

Consultant, FTC Joint Venture Project (1999).

Advisory Committee, FTC Hearings on Global and Innovation-Based Competition (1996).

Associate Editor (Industrial Organization), *Journal of Economic Perspectives* (1987–1993).

American Bar Association Antitrust Task Force on Second Requests (1990).

Advisory Board, Georgetown Project on Treble Damages (1986–1987).

Associate Editor, *Journal of Industrial Economics* (1983–1988).

Associate Editor, *International Journal of Industrial Organization* (1984–1989).

Secretary, Antitrust Section, American Association of Law Schools (1983–1984).

Memberships: American Economic Association, American Bar Association, Phi Beta Kappa.

Nominating Committee: American Economic Association, 1982.

Economics Editorial Advisor, *Journal of Consumer Research*, 1982.

OTHER ACTIVITIES

Board of Directors, Charles River Associates Incorporated.

Management Advisory Committee, La Leche League International (1994–1999).

Board of Trustees, The Lowell School (1989–1995).

HONORS AND AWARDS

NSF Graduate Fellowship, 1968–1972.

Graduated *summa cum laude*, with Honors in Economics, from the University of Pennsylvania, 1968.

Schoenbaum Prize in Economics, University of Pennsylvania, 1968.

PUBLICATIONS

Books and Reports

Strategy, Predation, and Antitrust Analysis. (Editor.) Federal Trade Commission, 1981.

Consumer Post-Purchase Remedies. With J. Howard Beales et al. Federal Trade Commission Staff Report, 1980.

Consumer Information Remedies. With Lawrence Kantor et al. Federal Trade Commission Staff Report, 1979.

Articles

"A Few Righteous Men: Imperfect Information, Quit-for-Tat and Critical Mass in the Dynamics of Cooperation." Festschrift in Honor of Joseph E. Stiglitz (2003) (Forthcoming). With Serge Moresi.

"Chicago & Post-Chicago Antitrust: Issues for Discussion." Canadian Bar Association (Annual Fall Conference on Competition Law), 2002.

"Should Concentration Be Dropped From the Merger Guidelines." With Jon Baker. Symposium on Antitrust Analysis of Mergers: Merger Guidelines vs. Five Forces, University of West Los Angeles Law Review, 2001.

"Analysis of Foreclosure in the EC Guidelines on Vertical Restraints." International Antitrust Law & Policy, Annual Proceedings 2000, Fordham University School of Law, 2001.

"The Flawed Fragmentation Critique of Structural Remedies in the Microsoft Case." With R. Craig Romaine and Robert Levinson. *Antitrust Bulletin*, 2001.

"The First Principles Approach, Kodak and Antitrust at the Millennium." *Antitrust Law Journal*, 2000.

"Competitive Analysis of Partial Ownership: Financial Interest and Corporate Control." With Daniel O'Brien. *Antitrust Law Journal*, 2000.

"The Competitive Effects of Passive Minority Equity Interests: Reply," With Daniel O'Brien. *Antitrust Law Journal*, 2001.

"Preserving Monopoly: Economic Analysis, Legal Standards and Microsoft." With R. Craig Romaine. *George Mason University Law Review*, 1999.

"Decision Theory and Antitrust Rules," With C. Frederick Beckner, III. *Antitrust Law Journal*, 1999.

"Analyzing Vertical and Horizontal Cross Ownership in Cable Television: The Time Warner-Turner Merger." With S. Besen, J. Murdoch, D. O'Brien, and J. Woodbury. In J. Kwoka and L. White (eds.), *The Antitrust Revolution*, 1998.

"Vertical Mergers and Leverage." In *The New Palgrave Dictionary of Law and Economics*, 1998.

"You Keep on Knocking but You Can't Come in: Evaluating Restrictions on Access Rules to Input Joint Ventures." With D. Carlton. *Harvard Journal of Law and Technology*, 1996.

"Evaluating Vertical Mergers: A Post-Chicago Approach." With M. Riordan. *Antitrust Law Journal*, 1995.

"Evaluating Vertical Mergers: Reply to Reiffen and Vita Comment." With M. Riordan. *Antitrust Law Journal*, 1995.

"Exclusionary Vertical Restraints: Has Economics Mattered?" *American Economic Review*, May 1992.

"An Economic Analysis of Copyright Collectives." With S. Besen and S. Kirby. *Virginia Law Review*, 1991.

"Competition Among Complements, and Intra-Network Competition." With N. Economides. *Journal of Industrial Economics*, 1992.

"Rowing Against the Tidewater: A Theory of Voting by Multi-Judge Panels." With D. Post. *Georgetown University Law Review*, 1992.

"Evaluating Network Pricing Self-Regulation." In Guerin-Calvert and Wildman (eds.), *Electronic Services Networks: A Business and Public Policy Challenge of Electronic Shared Networks*, 1991.

"Equilibrium Vertical Foreclosure." With J. Ordover and G. Saloner. *American Economic Review*, 1990.

"Vertical Foreclosure Without Commitment: Reply to Reiffen." With J. Ordover and G. Saloner. *American Economic Review*, 1992.

"Deregulating Self-Regulated Shared ATM Networks." *Economics of Innovation and New Technology*, 1990.

"Monopoly Power and Market Power in Antitrust Law." With T. Krattenmaker and R. Lande. *Georgetown University Law Review*, 1987.

"Analyzing Anticompetitive Exclusion." With T. Krattenmaker. *Antitrust Law Journal*, 1987.

"Cost-Raising Strategies." With D. Scheffman. *Journal of Industrial Economics*, 1987.

"Information, Welfare and Product Diversity." With J. Stiglitz. In Feiwel et al. (eds.), *Arrow and the Foundations of the Theory of Economic Policy*, 1987.

"Antitrust Analysis of Exclusionary Rights: Raising Rivals' Costs to Gain Power Over Price." With T. Krattenmaker. *Yale Law Journal*, December 1986.

"Competition and Cooperation in the Market for Exclusionary Rights." With T. Krattenmaker. *American Economic Review*, May 1986.

"Private Antitrust Litigation: Introduction and Framework." With L. White. *Georgetown University Law Review*, 1986.

"Economics of Private Antitrust Litigation." With L. White. *Antitrust Law Journal*, 1986. Reprinted by the Senate Judiciary Committee.

"Quantifying the Competitive Effects of Production Joint Ventures." With T. Bresnahan. *International Journal of Industrial Organization*, 1986.

"Measuring Ease of Entry." *Antitrust Bulletin*, 1986.

"Firm-Specific Information, Product Differentiation and Industry Equilibrium." With J. Perloff. In Morris et al. (eds.), *Strategic Behavior and Industrial Competition*, 1986.

"Practices that (Credibly) Facilitate Oligopoly Coordination." In Stiglitz et al. (eds.), *New Developments in the Analysis of Market Structure*, 1986.

"Equilibrium with Product Differentiation." With J. Perloff. *Review of Economic Studies*, January 1985.

"A Practical Guide to Merger Analysis." With J. Simons. *Antitrust Bulletin*, Winter 1984.

"A Bidding Model of Special Interest Regulation: Raising Rivals' Costs in a Rent-Seeking Society." With D. Scheffman and W. Schwartz. In *The Political Economy of Regulation: Private Interests in the Regulatory Process*, 1984.

"Judo Economics: Capacity Limitations and Coupon Competition." With J. Gelman. *Bell Journal of Economics*, Autumn 1983.

"Raising Rivals' Cost." With D. Scheffman. *American Economic Review*, May 1983.

"Defects in Disneyland: Quality Control as a Two-Part Tariff." With A. Braverman and J.L. Guasch. *Review of Economic Studies*, January 1983.

"The Theory of Sales: A Simple Model of Equilibrium Price Dispersion with Identical Agents." With J. Stiglitz. *American Economic Review*, December 1982.

"A Framework for Evaluating Consumer Information Regulation." With H. Beales, M. Mazis, and R. Staelin. *Journal of Marketing*, Winter 1981.

"Efficient Regulation of Consumer Information." With H. Beales and R. Craswell. *Journal of Law and Economics*, December 1981.

"Consumer Search and Public Policy." With H. Beales, M. Mazis, and R. Staelin. *Journal of Consumer Research*, June 1981.

"Information Remedies for Consumer Protection." With H. Beales and R. Craswell. *American Economic Review*, Papers and Proceedings, May 1981.

"Introduction." In S.C. Salop (ed.), *Strategy, Predation and Antitrust Analysis*, Federal Trade Commission, 1981.

"Strategic Entry Deterrence." *American Economic Review*, Papers and Proceedings, May 1979.

"Monopolistic Competition with Outside Goods." *Bell Journal*, Spring 1979.

"A Model of the Natural Rate of Unemployment." *American Economic Review*, March 1979.

"Alternative Reservations Contracts." Civil Aeronautics Board, 1978.

"Parables of Information Transmission in Markets." In Mitchell (ed.), *The Effect of Information on Consumer and Market Behavior*, 1978.

"The Noisy Monopolist: Information, Price Dispersion and Price Discrimination." *Review of Economic Studies*, October 1977.

"Bargains and Ripoffs: A Model of Monopolistically Competitive Price Dispersion." With J. Stiglitz. *Review of Economic Studies*, October 1977.

"Self-Selection and Turnover in the Labor Market." With J. Salop. *Quarterly Journal of Economics*, November 1976.

"Information and Monopolistic Competition." *American Economic Review*, Papers and Proceedings, May 1976.

"Wage Differentials in a Dynamic Theory of the Firm." *Journal of Economic Theory*, August 1973.

"Systematic Job Search and Unemployment." *Review of Economic Studies* (April 1973).

Reviews/Comments/Testimony

"Slap Their Wrists? Tie Their Hands? Slice Them Into Pieces? Alternative Remedies for Monopolization in the *Microsoft* Case." *Antitrust*, 1999.

"Efficiencies in Dynamic Merger Analysis." Testimony at FTC Hearings on Global and Innovation-Based Competition (November 1995). A slightly revised version has been published as "Efficiencies in Dynamic Merger Analysis: Summary." With Gary Roberts. *World Competition*, June 1996.

"More Value for the Legal Dollar: A New Look at Attorney-Client Fees and Relationships." With R. Litan. *Judicature*, 1994.

"Kodak as Post-Chicago Law and Economics." *CRA Perspectives*, April 1993. Reprinted in Texas Bar Association, *Antitrust and Business Litigation Bulletin*, November 1993.

"Antitrust Goes to College." With Lawrence White. *Journal of Economic Perspectives*, Summer 1991.

"Analysis of Entry in the New Merger Guidelines." *Brookings Papers on Economic Activity*, 1991.

"Mergers and Antitrust." *Journal of Economic Perspectives*, 1987.

"Comment on Golbe and White, 'Time Series Analysis of Mergers.'" In Auerbach et al., *Mergers and Acquisitions*, National Bureau of Economic Research.

"Policy Implications of Conference Papers." In Auerbach et al., *Mergers and Acquisitions*, National Bureau of Economic Research.

"Evaluating Uncertain Evidence with Sir Thomas Bayes." *Journal of Economic Perspectives*, Summer 1987.

"Implications of the Georgetown Project for Treble Damages Reform." Senate Judiciary Committee, March 21, 1986.

"Policing Deceptive Advertising." Serial No. 97-134, 97th Congress.

"Entry Barriers, Consumer Welfare, and Antitrust Reform." In B. Bock et al., *Antitrust and New Views of Microeconomics*. Conference Board, 1986.

"Buy American, Save Your Job?" In J. Tobin et al., *Macroeconomics, Prices, and Quantities*. Brookings Institution, 1983.

"Selling Consumer Information." With H. Beales. In J. Olson et al., *Advances in Consumer Research*, Vol. VII, 1980.

"Comment on R. Schmalensee, 'On the Use of Economic Models in Antitrust.'" In O. Williamson et al., *Antitrust Law and Economics*, 1980.

"Review of K. Lancaster, 'Variety, Equity, and Efficiency,'" *Journal of Economic Literature*, 1980.

JOHN R. WOODBURY—Vice President

Ph.D. Economics, Washington University (St. Louis)
M.A. Economics, Washington University (St. Louis)
B.A. Economics, College of the Holy Cross, *summa cum laude*

Dr. Woodbury's principal fields of expertise are industrial organization, regulation, antitrust, law, and economics. He is an expert in and has published on the economics of antitrust and regulation in broadcasting, cable, telecommunications, and other industries.

PRIOR PROFESSIONAL EXPERIENCE

Microeconomic Consulting and Research Associates, Inc. (formerly Competitive Analysis Group, ICF Consulting Associates)

Principal, 1989–1992. Responsible for providing antitrust and regulatory advice to clients.

Analysis Group

Research Associate, 1989. Responsible for providing antitrust and regulatory advice to clients.

Federal Trade Commission (1985–1989)

Associate Director for Special Projects, Office of the Bureau Director, Bureau of Economics. Responsible for: initiating, conducting, and reviewing economic studies on Commission and other regulatory policies (including telecommunications); drafting speeches for the Chairman; and reviewing Bureau participation in FTC cases.

Assistant Director for Rulemaking, Division of Policy and Evaluation, Bureau of Consumer Protection. Responsible for managing the Commission's Rulemaking Agenda, and drafting recommendations to the Commission from the Bureau Director. Rules reviewed include Holder-in-Due-Course, Vocational Schools, Cooling-Off, and Funeral Rules.

Deputy Assistant Director, Regulatory Analysis, Bureau of Economics. Responsible for conducting or supervising studies or filings before regulatory agencies, including the Federal Communications Commission, the International Trade Commission, and the National Highway Traffic Safety Administration.

National Cable Television Association

Vice President, Department of Research and Policy Analysis, 1983–1985. Responsible for conduct or supervision of studies related to cable television, including consumer costs of the franchising process, deregulation of cable prices, effects of copyright fees on consumers, and the extent of competition with cable TV.

Federal Trade Commission

Senior Economist, Regulatory Analysis Division, Bureau of Economics, 1982–1983. Responsible for broadcasting and telecommunications.

Federal Communications Commission

Chief, Economics Division, Common Carrier Bureau. 1979–1982. Senior economic advisor to Bureau and Commission on common carrier policy. Directed 25 subordinates in policy analysis.

Industry Economist, Network Inquiry Special Staff. Responsible for the analysis of the program supply industry and the competitive impact of new broadcast technology.

Civil Aeronautics Board

Brookings Economic Policy Fellow assigned to Office of Economic Analysis, 1978–1979. Responsible for the development of merger policy, international aviation policy, and service to small communities. Position: Assistant Chief, Policy Analysis Division.

State University of New York at Albany

Assistant Professor of Economics, 1977–1978.

Federal Reserve Bank of New York

Economist, International Research Department, 1975–1977. Responsible for assessing bank-reported capital flows and exchange-rate movements.

Southern Illinois University—Carbondale

Lecturer, 1974–1975.

PUBLICATIONS

“Analyzing Vertical and Horizontal Cross Ownership in Cable Television: the Time Warner-Turner Merger (1996),” in J.E. Kwoka and L.J. White, *The Antitrust Revolution: Economics, Competition, and Policy*, Scott, Foresman. With S. Besen, E. Murdoch, D. O’Brien, and S. Salop. Third Edition, Oxford University Press, 1999.

“Telecommunications in the US: Evolution to Pluralism.” With S. Besen and S. Brenner. In B. Lange (ed.), *ISDN in the USA, Japan, Singapore and Europe*, 1996.

“Market Structure, Program Diversity, and Radio Audience Size.” With R. Rogers. *Contemporary Economic Policy* 1996.

"Rate Regulation, Effective Competition, and the Cable Act of 1992." With S. Besen. *Hastings Communications and Entertainment Law Journal*, 1994.

"Assessing Competition and Deregulation in Telecommunications: Some Observations on Methodology." In B. Cole (ed.), *After the Breakup: Assessing the New Post-AT&T Divestiture Era*. New York: Columbia University Press, 1991.

"Deterrence and Justice." With J. Bilmes. *Research in Law and Economics*, 1991.

"The First Amendment, Cable MTV, and the Must-Carry Rule: Towards a Cost-Benefit Analysis." *Proceedings of the Airlie House Conference on Telecommunications*, 1987.

"Video Competition and Consumer Welfare." In E. Noam (ed.), *Proceedings of the Arden House Conference on Video Competition*. New York: Columbia University Press, 1986.

Misregulating Television. With S. Besen, R. Metzger, and T. Krattenmaker. Chicago: University of Chicago Press, 1984.

"Regulation, Deregulation, and Antitrust in Telecommunications." With S. Besen. *Antitrust Bulletin*, Spring 1983.

"Determinants of Network Television Program Prices: Implicit Contracts, Regulation, and Bargaining Power." With S. Besen and G. Fournier. *Bell Journal of Economics*, Autumn 1983.

"Advertising, Price Competition, and Market Structure." With A. Arterburn. *Southern Economic Journal*, January 1981.

"Exchange Rate Stability and Monetary Policy." With B. Putnam. Albany Discussion Paper #95 in *Review of Economics and Business Research*, Winter 1980.

"Capital Market Integration Under Fixed and Floating Exchange Rates: An Empirical Analysis." *Journal of Money, Credit, and Banking*, May 1980.

OTHER COMPLETED RESEARCH

"Empirical Evidence on Efficiencies in the Common Ownership of Broadcast Stations." With K. Anderson. Comments on FCC Proceeding, 1991.

"Do Government-Imposed Ownership Restrictions Inhibit Efficiency?" *Working Paper of the Bureau of Economics*, No. 169, 1988.

"Over-the-Air Television and Cable Prices: An Econometric Inquiry." With M. Bykowsky. Served as basis of FCC decision deregulating cable prices, 1985.

"The Effect of Rate Regulation and Franchise Delay on Program Availability." With D. Koran. Comments on FCC Proceeding, 1985.

"Pricing Flexibility and Consumer Welfare: The Deregulation of Basic Cable Rates." NCTA White Paper, 1984.

"Economic Assessment of the Financial Interest and Syndication Rules." With K. Anderson. Comments on FCC Proceeding, 1983.

"Domestic Fixed Satellite Transponders Sales." Comments on FCC Proceeding, 1982.

An Analysis of Television Program Production, Acquisition, and Distribution. With R. Metzger. Network Inquiry Special Staff, Preliminary Report, Federal Communications Commission, June 1990.

"Production Abroad: Theoretical Considerations and Empirical Analysis." Mimeo, 1978.

"Scale Economies in the Airline Industry: A Survey." Mimeo, 1978.

PRESENTED PAPERS

"Market Structure, Program Diversity, and Radio Audience Size." With R. Rogers. Meetings of the Western Economics Association, July 1993.

"The Effects of Rate Deregulation on Cable Subscribers." With K. Baseman. Policy Approaches to the Deregulation of Network Industries: An American Enterprise Institute Conference, October 1990.

"Economic Analysis and Policy Implications of the Financial Interest and Syndication Rule." Telecommunications Policy Research Conference, Airlie House, October 1990.

"The Design and Evaluation of Competitive Rules Joint Ventures for Mergers and Natural Monopolies." With F. Warren-Boulton. American Economic Association Meetings, December, October 1990.

"Do Media Ownership Restrictions Reduce Economic Efficiency?" Telecommunications Policy Research Conference, Airlie House, November 1989.

"The Conflict Between Spectrum Efficiency and Economic Efficiency." With R. Rogers. Telecommunications Policy Research Conference, Airlie House, November 1989.

"Regulation versus Antitrust." Annenberg Conference: The Divestiture Five Years Later, March 1989.

"Regulating Cable Television." Telecommunications Policy Research Conference, Airlie House, September 1987.

"An Empirical Analysis of Television Program Prices." With S. Besen and G. Fournier. Meetings of the Southern Economic Association, November 1981.

"Flexible Exchange Rates and Market Integration." With B. White. Federal Reserve System Conference on Financial Market Research, June 1979.

“Advertising, Price Competition, Market Structure.” With A. Arterburn. Meetings of the Southern Economic Association, November 1978.

“The Effects of Exchange Rate Systems on International Capital Market Integration.” With B. White. Federal Reserve System Conference on International Research, November 1977.

OTHER PROFESSIONAL ACTIVITIES

Chair, “Competition between Cable Television and Telephone Companies.” Telecommunications Policy Research Conference, September 1991.

Discussant, “Competition and Ownership in the Media.” Telecommunications Policy Research Conference, September 1991.

Chair, “Spectrum Management Session.” Telecommunications Policy Research Conference, Airlie House, September 1988.

Book Review, *Productivity in the United States* by John Kendrick and Elliot Grossman, *Southern Economic Journal*, April 1981.

Discussant, “Deregulation of Telecommunications.” Meetings of the Western Economic Association, July 1981.

Referee, *Southern Economic Journal*, *RAND Journal of Economics*, Harvard University Press.

AWARDS

Award for Excellence in Economics (FTC), 1988.

Competition Advocacy Award (FTC), 1987.

Brookings Economic Policy Fellow, 1978–1979.

SUNY Faculty Research Grant, 1978.

NSF Traineeship, 1973–1974.

Finalist, Woodrow Wilson Fellowship Competition, 1971.

Attachment B

**Sprint/Nextel Application for Transfer of Control
CRA Analysis**

APPENDIX 2

The tables to Appendix 2 have been redacted.

